



AFCTN Test Report 94-097

AFCTB-ID
94-055



Technical Engineering Drawing Transfer Using:

Loral Defense Systems' Data



Supporting:

Naval Undersea Warfare Center
Vertical Launch ASROC Program
(Code 416)

Contract #N00024-89-C-3204

MIL-D-28000A (IGES)

Quick Short Test Report

19 May 1994



19960822 047



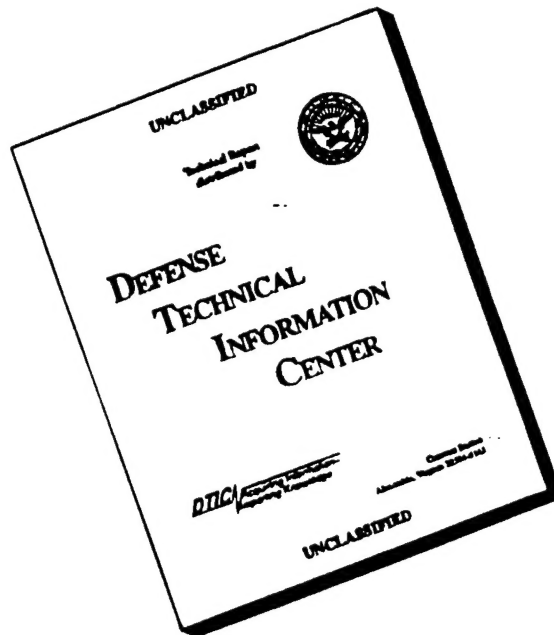
Prepared for
Electronic Systems Center
Air Force CALS Program Office
HQ ESC/AV-2
4027 Colonel Glenn Hwy Suite 300
Dayton OH 45431-1672

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Using:
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Vertical Launch ASROC Program (Code 416)
(Contract #N00024-89-C-3204)

MIL-STD-1840A
MIL-D-28000A (IGES)

Quick Short Test Report

19 May 1994

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Air Force CALS Test Bed

Notification of Test Results

19 May 1994

This notice documents the results of an Air Force CALS Test Bed (AFCTB) Quick Short Test Report (QSTR) evaluation of data submitted by:

Loral Defense Systems

Identified as follows:

| | |
|-----------------|---|
| Title: | Technical Engineering Drawing Transfer |
| Program: | Naval Undersea Warfare Center |
| Program Office: | Vertical Launch ASROC (Code 416) |
| Contract No.: | N00024-89-C-3204 |
| QSTR No.: | AFCTB-ID 94-055 |

Received on the following media: Electronic ftp Transfer

The results of the QSTR evaluation are as follows:

| | |
|-----------------------------|-------------|
| MIL-STD-1840A Standard | N/A |
| MIL-STD-1840A Media Format: | N/A |
| MIL-D-28000A IGES: | Fail |
| MIL-M-28001B SGML: | N/A |
| MIL-R-28002A Raster: | N/A |
| MIL-D-28003 CGM: | N/A |

Formal results with associated disclaimer are documented and available from the AFCTB.

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1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Loral Defense System's interpretation and use of the CALS standards in transferring technical engineering data. Loral used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff using an electronic ftp transfer. The stated purpose of this test was to evaluate the data and not the CALS format.

2. Test Parameters

Test Plan: AFCTB 94-055

Date of
Evaluation: 19 May 1994

Evaluator: George Elwood
Air Force CALS Test Bed
DET 2 HQ ESC/AV-2P
4027 Colonel Glenn Hwy
Suite 300
Dayton OH 45431-1672

Data
Originator: Bob Medvitz
Loral Defense Systems
1210 Massillon Road
Dept. 404 Plant G-3
Akron OH, 44315
(216) 796-5740
(216) 796-3274 (fax)

Data
Description: Technical Engineering Drawing Test
1 Initial Graphics Exchange Specification
(IGES) file

Data
Source System:

IGES

HARDWARE

Sun Sparc II

SOFTWARE

Computervision CADDS 5

Evaluation Tools Used:

MIL-D-28000 (IGES)
HP 735

InterCAP X-Change v7.82
Island Software IslandDraw v3.0
Carberry CADLeaf v3.1.2
International TechneGroup Incorporated
(ITI) IGES/Works v2.0

SGI Indigo2

AUTODESK AutoCAD R12
Cadkey Cadkey v6.0
IGES Data Analysis (IDA) CALSView
ITI IGES/Works v2.0.0

Sun SparcStation 2

Carberry CADLeaf Plus v3.1
IDA Parser/Verifier v92
IDA IGESView v3.05
Intergraph I/EMS 02.00.01.11
Intergraph I/CIGES 02.00.01.03
ITI IGES/Works v1.3
Rosetta Technologies Prepare
Rosetta Technologies Preview v3.2

PC 486/50

AUTODESK AutoCAD 386 R12
AUTODESK AutoCAD 386 R11
IDA IGESView Windows

Standards
Tested:

MIL-D-28000A

3. 1840A Analysis

3.1 External Packaging

The files arrived at the Air Force CALS Test Bed (AFCTB) via an electronic transfer to the internet server. No physical media was exchanged or evaluated.

3.2 Transmission Envelope

The files received by the AFCTB were not MIL-STD-1840A. The files were not named per the standard conventions, as the stated purpose of the evaluation was the basic data structure.

3.2.1 Tape Formats

No tape was submitted for evaluation.

3.2.2 Declaration and Header Fields

The files were submitted for evaluation without the CALS headers or Document Declaration file. The purpose of the evaluation was the basic data files.

4. IGES Analysis

The transfer contained one IGES file. The Start Section of the file was checked for the required conformance statement, as required by MIL-D-28000A, para. 3.2.2.4.1. This was not found. The file contained three drawings and eleven views.

The file was evaluated using IDA's *parser/verifier* set for CALS Class II. This utility reported several CALS IGES errors along with basic IGES errors. The log file is included in Appendix A, Section 9 of this report.

The first error was reported in the global section. The start section indicated the IGES specification can only address version 4.0 and ASME Y14.26M- 1989 (Index 23 values of 6 or 7). MIL-D-28000A para. 3.2.1.3.2 defines this requirement. The next release of MIL-D-28000 will permit more current releases of the IGES specification.

Specification version = 8 (IGES 5.0)
ERROR 4048: Illegal specification version for CALS Class II specified.

The next reported error was the use of illegal text fonts. MIL-D-28000A, Table II, Note three defines the permitted fonts as 1, 1001, 1002, or 1003.

*** Entity type: 212

ERROR 4050: Illegal text font for CALS Class II specified for string 1 at D 421.

| | | | | | | | | | |
|-----|-----|-----|---|-----|---|---|---|------------|-----|
| 212 | 429 | 1 | 1 | 243 | 0 | 0 | 0 | 10101D | 421 |
| 212 | 1 | -11 | 2 | 7 | | | | MIPTR 208D | 422 |

This must be 1, 1001, 1002 or 1003

vv

| | | |
|--|------|-----|
| 212,1,1,0.1666666666666667,0.25,12,1.570796,0.0,0,0, | 421P | 429 |
| 30.420521418254,18.888216018677,0.0,1HA; | 421P | 430 |

The next CALS error was reported against entity types 312 320 and 420. These are not permitted in CALS Class II files. They are only permitted in Class III electrical files.

*** Entity type: 312

WARNING 4038: Entity type is not allowed in CALS Class II.

*** Entity type: 320

WARNING 4038: Entity type is not allowed in CALS Class II.

*** Entity type: 420

WARNING 4038: Entity type is not allowed in CALS Class II.

MIL-D-28000A, Table II, permits the use of only forms 3, 4 or 7 for entity types 402.

*** Entity type: 402

ERROR 4042: Illegal form for CALS Class II specified at D 545.

| | | | | | | | | | |
|-----|-----|---|---|----|---|---|---|------|-----|
| 402 | 557 | 1 | 1 | 0 | 0 | 0 | 0 | 201D | 545 |
| 402 | 0 | 0 | 3 | 19 | | | | D | 546 |
| | | | | ^^ | | | | | |

This must be 3, 4, or 7.

The AFCTB has several tools for viewing IGES files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The file was converted using a utility, available within the AFCTB, with no reported errors. The resulting file was read into Island Software's *IslandDraw*, displayed and printed without a reported error. The only image displayed was the first drawing.

The file was read using AUTODESK's AutoCAD R12 with translator version 5.1. This utility reported several errors and warnings during the translation. When displayed, the three drawings were found. Some entities were noted as missing. Font errors were inserted at the AFCTB and were not an error in the software.

The file was converted using Cadkey's *ig2c* utility. The resulting file was read into Cadkey's *Cadkey*, displayed and printed. Only one image was displayed. All of the entities on this image were noted; however, the file was not usable.

According to Ken Erman of Cadkey, "...the CADKEY output would resembled the desired output more closely by manipulating the levels. To explain: In version 6 of CADKEY's IGES we organize IGES drawings and Views by level starting on level 241 in ascending order, we also turn on all levels that contain information. Therefore by simply turning levels on or off the desired image may be achieved...."

The files were read into Carberry's *CADLeaf* software without a reported error. This utility reported three drawings. Only part of drawing 1 and 2 were displayed. The layout image appeared to be complete.

According to R. Bryan DiAntonio of Carberry Technology, "Using the Bound "Data" option, the complete image displayed and printed."

The file was read using IDA's *CALSVIEW*. No problems were noted during this procedure. All three drawings and eleven views could be called up and viewed without a problem.

The file was read using IDA's *IGESVIEW* and *IGESVIEW for Windows* with no reported errors. All three drawings and eleven views displayed.

The file was read using InterCAPS' *X-Change*. Only one image displayed. All of the entities displayed around the screen. The results looked like the Cadkey output.

The IGES file was converted using Intergraph's *I/CIGES* utility without a reported error. The resulting file was read into Intergraph's *I/EMS* and displayed. Not all of the entities could be found. Those that did display were disjointed.

The file was read using ITI's *IGESWORKS* without a reported error. The three drawings displayed. In one of the drawings some of the entities were missing.

The IGES file was converted using Rosetta Technologies' *Prepare* with reported errors. See Appendix A, Section 9.1.4 for these errors. The resulting file was read into Rosetta Technologies' *Preview*, displayed and printed. Only the three drawings were converted and displayed.

Because of the multiple errors in the IGES file, it does not meet the CALS MIL-D-28000A, Class II specification.

5. SGML Analysis

No Standard Generalized Markup Language (SGML) files were included in this evaluation.

6. Raster Analysis

No Raster files were included in this evaluation.

7. CGM Analysis

No Computer Graphics Metafile (CGM) files were included in this evaluation.

8. Conclusions and Recommendations

The evaluation was a first look at an IGES output for CALS standards by Loral Defense Systems - Akron. No CALS data set was submitted with this file.

The IGES file had several CALS MIL-D-28000A Class II errors and does not meet the specification.

9. Appendix A - Detailed IGES Analysis

9.1 File VLA

9.1.1 Parser/Verifier Log

```
*****
***** IGES PARSER/VERIFIER *****
***** MARCH 1993 *****
***** IGES Data Analysis *****
***** (708) 344-1815 *****
*****
```

Input file is vla.igs

Checking conformance to CALS Class II (MIL-D-28000A 2/10/92)

Today is May 18, 1994 3:56 PM

```
*****
***** CHECK FILE SYNTAX *****
*****
```

| Section | Records |
|-----------|-----------------------|
| Start | 1 |
| Global | 4 |
| Directory | 3346 (1673 Entities) |
| Parameter | 3734 |
| Terminate | 1 |

NITPICK 2489: Excess precision in real constant (0.49987318625999) for Mat[0][0]
of D 35.

NITPICK 2489: Excess precision in real constant (0.68794929981232) for Mat[0][1]
of D 35.

NITPICK 2489: Messages regarding excess precision suppressed.

```
*****
***** SUMMARY AND STATISTICS *****
*****
```

*** File and Product Name Information ***

File name from sender = 'vlaiges'
File creation Date.Time = '940516.110119'
Model change Date.Time = '691231.190003'
SEVERE 2072: Macro Entity type number (652368) is out of defined range at D
654040.
Author = 'hofacre'
Department = 'loral-vla'
Product name from sender = 'e.3322.620.6207386'
Destination product name = 'e.3322.620.6207386'

*** Parameter Delimiters ***

Delimiter = ','
Terminator = ';'

*** Originating System Data ***

System ID = 'COMPUTERVISION CADD5S Fourth Edition'
Preprocessor version = 'CADD5S-IGES REVISION 7.0 (1-Apr-93)'
Specification version = 8 (IGES 5.0)
ERROR 4048: Illegal specification version for CALS Class II specified.

*** Precision levels ***

Integer bits = 32
Floating point - Exponent = 38 Mantissa = 6
Double precision - Exponent = 308 Mantissa = 14

*** Global Model Data ***

Model scale = 1.0000E+00
Unit flag = 1
Units = 'IN'
Line weights = 32767
Maximum line thickness = 3.276700E+01
Minimum line thickness = 1.000000E-03
Granularity = 1.000000E-04
Maximum coordinate = 4.000000E+01

Drafting standard applicable to original data is ANSI.

*** Status Flag Summary ***

| | |
|-----------------------|------|
| Blank status: Visible | 1656 |
| Blanked | 17 |

Independence: Independent 598
 Physically Subordinate 947
 Logically Subordinate 39
 Totally Subordinate 89

Entity use: Geometry 554
 Annotation 975
 Definition 141
 Other 3
 Logical/Positional 0
 2D parametric 0
 Construction geometry 0
 Not Specified 0

Hierarchy: Structure DE applies 11
 Subordinate DE applies 1662
 Hierarchy property applies 0
 Not Specified 0

*** Entity Occurrence Counts ***

| Entity | Form | Level | Count | Type |
|--------|------|-------|-------|--|
| ----- | ---- | ----- | ----- | ---- |
| 100 | 0 | 7 | 1 | Circular arc |
| 100 | 0 | 27 | 81 | |
| 100 | 0 | 36 | 3 | |
| 100 | 0 | 37 | 67 | |
| 100 | 0 | 38 | 3 | |
| 100 | 0 | 240 | 1 | |
| 100 | 0 | 243 | 8 | |
| 102 | 0 | 0 | 8 | Composite curve |
| 106 | 11 | 243 | 17 | Copious data - Piecewise planar, linear string (2D linear path) |
| 106 | 12 | 244 | 21 | Copious data - Piecewise linear string (3D linear path) |
| 106 | 20 | 242 | 24 | Centerline |
| 106 | 31 | 242 | 4 | Section lines - General use, iron, brick, stone masonry |
| 106 | 40 | 243 | 27 | Witness line |
| 108 | 0 | 0 | 44 | Plane, Unbounded |
| 110 | 0 | 0 | 1 | Line |
| 110 | 0 | 26 | 60 | |
| 110 | 0 | 27 | 34 | |
| 110 | 0 | 28 | 51 | |
| 110 | 0 | 36 | 21 | |
| 110 | 0 | 37 | 122 | |
| 110 | 0 | 38 | 20 | |

| | | | | |
|-----|----|-----|-----|--|
| 110 | 0 | 240 | 17 | |
| 110 | 0 | 241 | 228 | |
| 110 | 0 | 242 | 45 | |
| 110 | 0 | 243 | 70 | |
| 116 | 0 | 0 | 1 | Point |
| 116 | 0 | 243 | 14 | |
| 116 | 0 | 244 | 6 | |
| 124 | 0 | 0 | 41 | Transformation matrix |
| 126 | 0 | 240 | 5 | Rational B-spline curve |
| 126 | 0 | 241 | 6 | |
| 126 | 0 | 243 | 2 | |
| 202 | 0 | 243 | 12 | Angular dimension |
| 206 | 0 | 243 | 1 | Diameter dimension |
| 210 | 0 | 243 | 20 | General label |
| 212 | 0 | 241 | 90 | General note |
| 212 | 0 | 243 | 58 | |
| 212 | 2 | 243 | 5 | General note - imbedded font change dimension |
| 212 | 4 | 243 | 2 | General note - subscripted dimension |
| 212 | 7 | 241 | 125 | General note - multiple stack/center justified |
| 212 | 7 | 243 | 21 | |
| 212 | 8 | 241 | 1 | General note - multiple stack/right justified |
| 214 | 3 | 243 | 58 | Leader arrow - Filled triangle |
| 216 | 0 | 243 | 6 | Linear dimension |
| 228 | 3 | 243 | 6 | Feature control frame |
| 230 | 0 | 241 | 8 | Sectioned area (Standard Crosshatching) |
| 304 | 2 | 0 | 3 | Line font definition - repeating pattern |
| 312 | 0 | 241 | 57 | Text template - absolute coordinates |
| 314 | 0 | 0 | 9 | Color definition |
| 320 | 0 | 0 | 4 | Network subfigure definition |
| 402 | 1 | 0 | 5 | Group instance |
| 402 | 3 | 0 | 19 | Views visible instance |
| 402 | 19 | 0 | 42 | Segmented views visible |
| 404 | 0 | 0 | 3 | Drawing |
| 406 | 5 | 0 | 28 | Property - Line widening |
| 406 | 15 | 0 | 14 | Property - Name |
| 406 | 16 | 0 | 3 | Property - Drawing size |
| 406 | 17 | 0 | 3 | Property - Drawing units |
| 410 | 0 | 0 | 11 | View - Orthographic parallel |
| 420 | 0 | 0 | 6 | Network subfigure instance |

*** Entity Count by Level ***

| Level | Count |
|-------|-------|
| 0 | 245 |
| 7 | 1 |
| 26 | 60 |
| 27 | 115 |
| 28 | 51 |
| 36 | 24 |
| 37 | 189 |
| 38 | 23 |
| 240 | 23 |
| 241 | 515 |
| 242 | 73 |
| 243 | 327 |
| 244 | 27 |

*** Labeling Information ***

77% of the entities are labeled.

Unlabeled 373

| Label | Count |
|-------|-------|
|-------|-------|

| | |
|-------|------|
| MIPTR | 1300 |
|-------|------|

*** Line Fonts Used in Data ***

| 100 | 102 | 104 | 106 | 108 | 110 | 112 | 114 | |
|-----|-----|-----|-----|-----|-----|-----|-----|--------------|
| - | - | - | - | - | - | - | - | Undefined |
| 161 | 8 | - | 93 | 44 | 659 | - | - | Solid |
| - | - | - | - | - | - | - | - | Dashed |
| - | - | - | - | - | - | - | - | Phantom |
| - | - | - | - | - | - | - | - | Center-line |
| - | - | - | - | - | - | - | - | Dotted |
| 3 | - | - | - | - | 10 | - | - | User defined |
| | | | | | | | | |
| 116 | 118 | 120 | 122 | 124 | 125 | 126 | 128 | |
| - | - | - | - | - | - | - | - | Undefined |
| 21 | - | - | - | 41 | - | 13 | - | Solid |
| - | - | - | - | - | - | - | - | Dashed |
| - | - | - | - | - | - | - | - | Phantom |
| - | - | - | - | - | - | - | - | Center-line |
| - | - | - | - | - | - | - | - | Dotted |
| - | - | - | - | - | - | - | - | User defined |

| | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|--------------|
| 130 | 132 | 134 | 136 | 138 | 140 | 142 | 144 | |
| - | - | - | - | - | - | - | - | Undefined |
| - | - | - | - | - | - | - | - | Solid |
| - | - | - | - | - | - | - | - | Dashed |
| - | - | - | - | - | - | - | - | Phantom |
| - | - | - | - | - | - | - | - | Center-line |
| - | - | - | - | - | - | - | - | Dotted |
| - | - | - | - | - | - | - | - | User defined |

*** Line Widths Used in Data ***

| Weight | Count | Width |
|-----------|-------|----------|
| Defaulted | 237 | (0.0010) |
| 1 | 1435 | (0.0010) |
| 14 | 1 | (0.0140) |

*** Colors Used in Data ***

| | |
|-----------|-----|
| Defaulted | 251 |
| Yellow | 75 |
| Magenta | 77 |
| Cyan | 305 |
| White | 4 |
| User | 961 |

 ***** ENTITY ANALYSIS *****

*** Entity type: 100

*** Entity type: 102

*** Entity type: 106

CAUTION 2331: Use of section lines (Form 31-38) is not recommended at D 1499.
 CAUTION 2331: Use of section lines (Form 31-38) is not recommended at D 1819.
 CAUTION 2331: Use of section lines (Form 31-38) is not recommended at D 1833.
 CAUTION 2331: Use of section lines (Form 31-38) is not recommended at D 2289.

*** Entity type: 108

*** Entity type: 110

-- 669 lines averaging 1.263212E+00 units --

*** Entity type: 116

*** Entity type: 124

41 transformation matrices, 3 non-zero translations.

NOTE 2341: 3 matrices contain translation information.

*** Entity type: 126

*** Entity type: 202

NOTE 2342: Zero witness line pointer at D 367.
NOTE 2342: Zero witness line pointer at D 385.
NOTE 2342: Zero witness line pointer at D 385.
NOTE 2342: Zero witness line pointer at D 395.
NOTE 2342: Zero witness line pointer at D 395.
NOTE 2342: Zero witness line pointer at D 407.
NOTE 2342: Zero witness line pointer at D 2053.
NOTE 2342: Zero witness line pointer at D 2065.
NOTE 2342: Zero witness line pointer at D 2065.

*** Entity type: 206

*** Entity type: 210

*** Entity type: 212

ERROR 4050: Illegal text font for CALS Class II specified for string 1 at D 421.

ERROR 4050: Illegal text font for CALS Class II specified for string 1 at D 423.

ERROR 4050: Messages regarding illegal text fonts suppressed.
400 text strings in data file.

Average text aspect ratio in file is 0.7997866.

Minimum text aspect ratio in file is 0.1333333.

Maximum text aspect ratio in file is 1.5000000.

FONTS USED IN FILE

| FONT | COUNT | NAME |
|------|-------|---------------------|
| 1 | 5 | Default ASCII Style |
| 2 | 220 | LeRoy |
| 12 | 102 | News Gothic |
| 13 | 3 | Lightline Gothic |
| 1003 | 70 | Drafting Font |

*** Entity type: 214

Average arrow aspect ratio in file is 2.9310345.
Minimum arrow aspect ratio in file is 2.0000000.
Maximum arrow aspect ratio in file is 3.0000000.

*** Entity type: 216

*** Entity type: 228

*** Entity type: 230

*** Entity type: 304

Default line font substitute at D 415 is Solid.
Default line font substitute at D 877 is Phantom.
Default line font substitute at D 2113 is Center-line.

*** Entity type: 312

WARNING 4038: Entity type is not allowed in CALS Class II.
WARNING 4038: Entity type is not allowed in CALS Class II.

<<<< PART OF LOG FILE REMOVED HERE >>>>

57 text templates in data file.
Average text template aspect ratio in file is 5.3280929.
Minimum text template aspect ratio in file is 0.5777778.
Maximum text template aspect ratio in file is 25.2858667.

*** Entity type: 314

Color specified at D 1 is named 'MAGENTA'.
Default color substitute is magenta.
Color specified at D 3 is named 'MAGENTA'.
Default color substitute is magenta.
Color specified at D 5 is named 'MAGENTA'.
Default color substitute is magenta.
Color specified at D 7 is named 'YELLOW'.
Default color substitute is yellow.
Color specified at D 9 is named 'YELLOW'.
Default color substitute is yellow.
Color specified at D 11 is named 'WHITE'.
Default color substitute is white.
Color specified at D 13 is named 'WHITE'.
Default color substitute is white.
Color specified at D 15 is named 'WHITE'.
Default color substitute is white.

Color specified at D 17 is named 'WHITE'.
Default color substitute is white.

*** Entity type: 320

WARNING 4038: Entity type is not allowed in CALS Class II.

Subfigure name: 'LM.FORM.NS2F1'.

Number of included entities = 219.

Reference designator: DEFAULTTED.

Number of connect points = 0.

WARNING 4038: Entity type is not allowed in CALS Class II.

Subfigure name: 'LM.FORM.NS2PL'.

Number of included entities = 19.

Reference designator: DEFAULTTED.

Number of connect points = 0.

WARNING 4038: Entity type is not allowed in CALS Class II.

Subfigure name: 'LM.FORM.NS2PLE'.

Number of included entities = 8.

Reference designator: DEFAULTTED.

Number of connect points = 0.

WARNING 4038: Entity type is not allowed in CALS Class II.

Subfigure name: 'LM.FORM.NSF2'.

Number of included entities = 131.

Reference designator: DEFAULTTED.

Number of connect points = 0.

*** Entity type: 402

ERROR 4042: Illegal form for CALS Class II specified at D 545.

ERROR 4042: Illegal form for CALS Class II specified at D 549.

ERROR 4042: Messages regarding form numbers suppressed.

*** Entity type: 404

NITPICK 2074: Entity use flag must be 1 for Drawing entity at D 2499.

Drawing at D 2499 contains 4 views.

Drawing at D 2499 contains 152 annotation entities.

NITPICK 2074: Entity use flag must be 1 for Drawing entity at D 2507.

Drawing at D 2507 contains 3 views.

Drawing at D 2507 contains 292 annotation entities.

NITPICK 2074: Entity use flag must be 1 for Drawing entity at D 2515.

Drawing at D 2515 contains 4 views.

Drawing at D 2515 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

Scale of view at D 31 is 1.000000E+00.
Orthographic View entity at D 31 has 4 clipping planes specified.
XMIN = -0.750 XMAX = 8.500
YMIN = 2.250 YMAX = 8.500
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 45 is 1.000000E+00.
CAUTION 2315: Matrix associated with view contains translation information at D 45.
Orthographic View entity at D 45 has 4 clipping planes specified.
XMIN = -3.310 XMAX = 2.940
YMIN = -2.170 YMAX = 3.830
ZMIN = Not Set ZMAX = Not Set

WARNING 2389: Blank status of view at D 59 is set. This flag should be ignored.

Scale of view at D 59 is 1.250000E-01.
Orthographic View entity at D 59 has 4 clipping planes specified.
XMIN = -16.564 XMAX = 13.745
YMIN = -11.278 YMAX = 13.392
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 71 is 2.000000E+00.
Orthographic View entity at D 71 has 4 clipping planes specified.
XMIN = 0.750 XMAX = 2.375
YMIN = 6.750 YMAX = 8.375
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 85 is 1.000000E+00.
CAUTION 2315: Matrix associated with view contains translation information at D 85.
Orthographic View entity at D 85 has 4 clipping planes specified.
XMIN = -8.711 XMAX = 9.042
YMIN = -8.736 YMAX = 9.282
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 99 is 1.000000E+00.
CAUTION 2315: Matrix associated with view contains translation information at D 99.
Orthographic View entity at D 99 has 4 clipping planes specified.
XMIN = -1.875 XMAX = 2.125
YMIN = -8.125 YMAX = 8.875
ZMIN = Not Set ZMAX = Not Set

WARNING 2389: Blank status of view at D 111 is set. This flag should be ignored.

Scale of view at D 111 is 1.250000E-01.
Orthographic View entity at D 111 has 4 clipping planes specified.
XMIN = -11.982 XMAX = 16.916
YMIN = -14.802 YMAX = 16.211
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 123 is 2.500000E-01.
Orthographic View entity at D 123 has 4 clipping planes specified.
XMIN = -23.841 XMAX = 23.454
YMIN = -14.344 YMAX = 21.903
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 137 is 2.500000E-01.
Orthographic View entity at D 137 has 4 clipping planes specified.
XMIN = -24.229 XMAX = 22.872
YMIN = -9.595 YMAX = 15.700
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 149 is 2.500000E-01.
Orthographic View entity at D 149 has 4 clipping planes specified.
XMIN = -18.026 XMAX = 20.062
YMIN = -13.181 YMAX = 15.991
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 163 is 2.500000E-01.
Orthographic View entity at D 163 has 4 clipping planes specified.
XMIN = -17.833 XMAX = 20.643
YMIN = -14.828 YMAX = 21.903
ZMIN = Not Set ZMAX = Not Set

*** Entity type: 420

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 285 references network subfigure at D 2997.
ERROR 2162: Network subfigure definition (D 2997) follows instance entity at
D 285.

Reference Designator at D 285 is DEFAULTTED.

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 287 references network subfigure at D 3037.
ERROR 2162: Network subfigure definition (D 3037) follows instance entity at
D 287.

Reference Designator at D 287 is DEFAULTTED.

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 289 references network subfigure at D 3055.
ERROR 2162: Network subfigure definition (D 3055) follows instance entity at
D 289.

Reference Designator at D 289 is DEFAULTTED.

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 291 references network subfigure at D 3055.
ERROR 2162: Network subfigure definition (D 3055) follows instance entity at
D 291.

Reference Designator at D 291 is DEFAULTTED.

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 1103 references network subfigure at D 3345.
ERROR 2162: Network subfigure definition (D 3345) follows instance entity at
D 1103.

Reference Designator at D 1103 is DEFAULTTED.

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 2119 references network subfigure at D 3055.
ERROR 2162: Network subfigure definition (D 3055) follows instance entity at
D 2119.

Reference Designator at D 2119 is DEFAULTTED.

*** Message Summary ***

2016: 3 Invalid entity use flag.
4000: 325 Miscellaneous CALS messages
4011: 1 Problems in the Global section
4018: 67 Illegal entity types
4019: 47 Entities with illegal form

*** Error Summary ***

0 fatal errors
1 severe errors
379 errors
69 warnings
7 cautions
7688 nitpicks
10 notes

*** End of Analysis of vla.igs ***

9.1.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

File: C:/TMP/VLA.xli

Date: Thu, May 19, 1994

Time: 10:59:44

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750

Translating from IGES file: C:/TMP/VLA.IGS

to AutoCAD Drawing: C:\VLA.dwg

Options obtained from: default settings

Curves Approximated to Tolerance of 0.01

Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

| IGES Text font | Style Name | ACAD Font |
|----------------|------------|-----------|
| 0 | SYMBOL0 | iges0 |
| 1 | STANDARD | txt |
| 2 | LEROY | txt |
| 3 | FUTURA | txt |
| 6 | COMP80 | txt |
| 12 | GOTHICE | gothice |
| 13 | GOTHICI | gothici |
| 14 | ROMANS | romans |
| 17 | ROMANT | romant |
| 18 | ROMAND | romand |
| 19 | OCR | txt |
| 1001 | SYMBOL1 | iges1001 |
| 1002 | SYMBOL2 | iges1002 |
| 1003 | SYMBOL3 | iges1003 |
| 2001 | KANJI | bigfont |

IGES Linefont/AutoCAD Linetype mapping

| IGES Line Font | AutoCAD linetype | Shape file |
|----------------|------------------|------------|
| 0 | BYLAYER | |
| 1 | CONTINUOUS | |
| 2 | DASHED | acad.lin |
| 3 | PHANTOM | acad.lin |
| 4 | CENTER | acad.lin |
| 5 | DOT | acad.lin |

Parse phase

*** Warning (IEVM_BAD_VECTOR_124) ***

(DE 35, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

*** Warning (IEVM_ZERO_LENGTH_ARC_100) ***

(DE 205, TF 100:0) Entity has zero length. Start point: 1.5625002e-001,
8.4221879e+000. Terminate point: 1.5625002e-001, 8.4221878e+000.

Action taken: Arc assumed to be full, Terminate point set equal to the Start point.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

*** Warning (IEVM_FIRST_NOT_COLINEAR_106) ***

(DE 819, TF 106:40) Entity's points are not directionally colinear. All vectors formed by consecutive points must be in the same direction.

Action taken: First point moved to a valid location.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

=====

Start Section:

vla iges trial

Global Section:

Parameter Delimiter: ,
Record Delimiter: ;
Sending Product ID: e.3322.620.6207386
File Name: vlaiges
System ID: COMPUTERVISION CADDS5 Fourth Edition
Preprocessor Version: CADDS-IGES REVISION 7.0 (1-Apr-93)
Size of Integer: 32
Sgl. Precision Mag: 38
Sgl. Precision Sig: 6
Dbl. Precision Mag: 308
Dbl. Precision Sig: 14
Receiving Product ID: e.3322.620.6207386
Model Space Scale: 1.000000
Unit Flag: 1
Unit String: IN
of Line Weights: 32767
Maximum Line Width: 32.767000

Creation Date: 05/16/94 11:01:19
Minimum Resolution: 0.000100
Maximum Coordinate: 40.000000
Author: hofacre
Organization: loral-vla
IGES Version Number: 8
Drafting Standard: 3
Model Create/Modify Date: 12/31/69 19:00:03

Entity Summary:

| Type | Form | Description | Count |
|------|------|-----------------------------------|-------|
| 100 | 0 | Circular Arc | 164 |
| 102 | 0 | Composite Curve | 8 |
| 106 | 11 | Planar Piecewise Linear Curve | 17 |
| 106 | 12 | Piecewise Linear Curve | 21 |
| 106 | 20 | Centerline Through Points | 24 |
| 106 | 31 | Section Entity | 4 |
| 106 | 40 | Witness Line | 27 |
| 108 | 0 | Plane (Unbounded) | 44 |
| 110 | 0 | Line | 669 |
| 116 | 0 | Point | 21 |
| 124 | 0 | Transformation Matrix | 41 |
| 126 | 0 | Rational B-Spline Curve (General) | 13 |
| 202 | 0 | Angular Dimension | 12 |
| 206 | 0 | Diameter Dimension | 1 |
| 210 | 0 | General Label | 20 |
| 212 | 0 | General Note (Simple) | 148 |
| 212 | 2 | General Note (Font change) | 5 |
| 212 | 4 | General Note (Subscript) | 2 |
| 212 | 7 | General Note (Center justified) | 146 |
| 212 | 8 | General Note (Right justified) | 1 |
| 214 | 3 | Leader (Filled triangle) | 58 |
| 216 | 0 | Linear dim - undetermined form | 6 |
| 228 | 3 | General Symbol (Feature Ctrl Fr.) | 6 |
| 230 | 0 | Section Area (Standard Fill) | 8 |
| 304 | 2 | Line Font Definition (Pattern) | 3 |
| 312 | 0 | Text Display Template (Absolute) | 57 |
| 314 | 0 | Color Definition | 9 |
| 320 | 0 | Network Subfigure Definition | 4 |
| 402 | 1 | Group (Unordered, w/back ptrs) | 5 |
| 402 | 3 | Views Visible | 19 |
| 402 | 19 | Segmented Views Visible | 42 |
| 404 | 0 | Drawing (form 0) | 3 |
| 406 | 5 | Property (Line Widening) | 28 |
| 406 | 15 | Property (Name) | 14 |
| 406 | 16 | Property (Drawing Size) | 3 |

| | | | |
|-------|----|----------------------------|-------|
| 406 | 17 | Property (Drawing Units) | 3 |
| 410 | 0 | View | 11 |
| 420 | 0 | Network Subfigure Instance | 6 |
| ----- | | | |
| | | | Total |
| | | | 1673 |
| ===== | | | |

Translation phase

*** Warning (ACAD_SUBFIGURE_NAME_CHANGED) ***

(DE: 3345 TF: 320:0)

Subfigure name "LM.FORM.NSF2" changed to "LM_FORM_NSF2" to make it a valid AutoCAD name.

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 3291, TYPE: 230, FORM: 0

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 3301, TYPE: 230, FORM: 0

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 3311, TYPE: 230, FORM: 0

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 3321, TYPE: 230, FORM: 0

Drawing Entity (404 Form 0) at DE 2499, with

name = 2,

size = 40.000000, 28.000000,

units = IN,

was processed in the AutoCAD drawing file: C:\VLA.dwg

Drawing Entity (404 Form 0) at DE 2507, with

name = 1,

size = 40.000000, 28.000000,

units = IN,

was processed in the AutoCAD drawing file: C:\VLA1

*** Warning (ACAD_SUBFIGURE_NAME_CHANGED) ***

(DE: 3055 TF: 320:0)

Subfigure name "LM.FORM.NS2PLE" changed to "LM_FORM_NS2PLE" to make it a valid AutoCAD name.

*** Warning (ACAD_ZEROLENGTHCURVE) ***

Curve length less than tolerance for DE: 321, TYPE: 106, FORM: 20

*** Warning (ACAD_SUBFIGURE_NAME_CHANGED) ***

(DE: 3037 TF: 320:0)

Subfigure name "LM.FORM.NS2PL" changed to "LM_FORM_NS2PL" to make it a valid AutoCAD name.

*** Warning (ACAD_SUBFIGURE_NAME_CHANGED) ***

(DE: 2997 TF: 320:0)

Subfigure name "LM.FORM.NS2F1" changed to "LM_FORM_NS2F1" to make it a valid AutoCAD name.

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 2661, TYPE: 230, FORM: 0

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 2671, TYPE: 230, FORM: 0

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 2691, TYPE: 230, FORM: 0

*** Error (ACAD_APPROXCURVEERROR) ***

Internal error 2302 approximating curve at DE: 2719, TYPE: 230, FORM: 0

Drawing Entity (404 Form 0) at DE 2515, with

name = LAYOUT,

size = 22.000000, 17.000000,

units = IN,

was processed in the AutoCAD drawing file: C:\VLA2

IGES Entity Summary

| Type | Form | Description | Count | Processed | Errors |
|------|------|-----------------------------------|-------|-----------|--------|
| 100 | 0 | Circular Arc | 164 | 164 | 0 |
| 102 | 0 | Composite Curve | 8 | 8 | 0 |
| 106 | 11 | Planar Piecewise Linear Curve | 17 | 17 | 0 |
| 106 | 12 | Piecewise Linear Curve | 21 | 21 | 0 |
| 106 | 20 | Centerline Through Points | 24 | 24 | 0 |
| 106 | 31 | Section Entity | 4 | 4 | 0 |
| 106 | 40 | Witness Line | 27 | 27 | 0 |
| 108 | 0 | Plane (Unbounded) | 44 | 44 | 0 |
| 110 | 0 | Line | 669 | 669 | 0 |
| 116 | 0 | Point | 21 | 21 | 0 |
| 126 | 0 | Rational B-Spline Curve (General) | 19 | 19 | 0 |
| 202 | 0 | Angular Dimension | 12 | 12 | 0 |
| 206 | 0 | Diameter Dimension | 1 | 1 | 0 |
| 210 | 0 | General Label | 20 | 20 | 0 |
| 212 | 0 | General Note (Simple) | 148 | 148 | 0 |
| 212 | 2 | General Note (Font change) | 5 | 5 | 0 |

| | | | | |
|--------|-------------------------------------|-------|-------|-------|
| 212 | 4 General Note (Subscript) | 2 | 2 | 0 |
| 212 | 7 General Note (Center justified) | 146 | 146 | 0 |
| 212 | 8 General Note (Right justified) | 1 | 1 | 0 |
| 214 | 3 Leader (Filled triangle) | 58 | 58 | 0 |
| 216 | 0 Linear dim - undetermined form | 6 | 6 | 0 |
| 228 | 3 General Symbol (Feature Ctrl Fr.) | 6 | 6 | 0 |
| 230 | 0 Section Area (Standard Fill) | 8 | 8 | 0 |
| 304 | 2 Line Font Definition (Pattern) | 3 | 3 | 0 |
| 312 | 0 Text Display Template (Absolute) | 57 | 57 | 0 |
| 314 | 0 Color Definition | 4 | 4 | 0 |
| 320 | 0 Network Subfigure Definition | 4 | 4 | 0 |
| 402 | 1 Group (Unordered, w/back ptrs) | 5 | 5 | 0 |
| 402 | 3 Views Visible | 19 | 19 | 0 |
| 402 | 19 Segmented Views Visible | 42 | 42 | 0 |
| 404 | 0 Drawing (form 0) | 3 | 3 | 0 |
| 406 | 15 Property (Name) | 14 | 14 | 0 |
| 406 | 16 Property (Drawing Size) | 3 | 3 | 0 |
| 406 | 17 Property (Drawing Units) | 3 | 3 | 0 |
| 410 | 0 View | 11 | 11 | 0 |
| 420 | 0 Network Subfigure Instance | 6 | 6 | 0 |
| | | ===== | ===== | ===== |
| Totals | | 1605 | 1605 | 0 |

AutoCAD Entity Summary

| Entity | Created | Errors |
|-----------|---------|--------|
| ===== | ===== | ===== |
| LINE | 968 | 0 |
| POINT | 21 | 0 |
| CIRCLE | 65 | 0 |
| TEXT | 353 | 0 |
| ARC | 99 | 0 |
| SOLID | 20 | 0 |
| INSERT | 90 | 0 |
| POLYLINE | 79 | 0 |
| DIMENSION | 19 | 0 |
| BLOCK | 88 | 0 |
| Totals | | |
| | | ===== |
| | | 1802 |
| | | 0 |

Error Summary:

The following message was issued 65 time(s)
Entity has zero length. Start point: %.7e, %.7e. Terminate point: %.7e, %.7e.

The following message was issued 4 time(s)
Entity's points are not directionally colinear. All vectors formed by
consecutive points must be in the same direction.

The following message was issued 35 time(s)
Entity has a column which is not a unit vector.

The following message was issued 1 time(s)
Curve length less than tolerance for DE: %d, TYPE: %d, FORM: %d

The following message was issued 8 time(s)
Internal error %d approximating curve at DE: %d, TYPE: %d, FORM: %d

The following message was issued 4 time(s)
Subfigure name "%s" changed to "%s" to make it a valid AutoCAD name.

Status: 0
Warning: 109
Error: 8
Fatal: 0

Elapsed Time:

Processor: 00:01:24
Clock: 00:01:24

=====

9.1.3 Parser Log - IGESWorks

International TechneGroup Incorporated
Validation Logfile

Date: Thursday May 19, 1994, 10:33 AM
Model: vla.igs

***** Validation Parameters *****

TOLERANCE CONFIGURATION VALUES

| | |
|--------------------------|----------------|
| ZERO_TOL | = 1.000000e-13 |
| MODEL_SPACE_PNT_COIN_TOL | = 1.000000e-03 |
| EPSILON_TOL | = 1.000000e-08 |
| PARM_SPACE_PNT_COIN_TOL | = 1.000000e-08 |
| ISO_PARM_CURVE_TOL | = 1.000000e-08 |
| NON_CONV_TOL | = 1.000000e-12 |
| KNOT_COIN_TOL | = 1.000000e-10 |
| SAME_INTER_TOL | = 1.000000e-12 |
| PARALLEL_LINES_TOL | = 1.000000e-07 |
| ANGLE_COIN_TOL | = 1.000000e-05 |
| PNT_PROJ_TOL | = 1.000000e-07 |
| COLIN_TOL | = 1.000000e-07 |
| COPLANAR_TOL | = 1.000000e-08 |
| ZERO_NORMAL_TOL | = 1.000000e-06 |
| SAME_TANGENT_TOL | = 1.000000e-04 |
| SAME_CURVATURE_TOL | = 1.000000e-04 |
| SAME_DERIVATIVE_TOL | = 1.000000e-03 |
| SINGULAR_TOL | = 1.000000e-10 |
| MODEL_LINEAR_APPROX_TOL | = 1.000000e-03 |

***** Entity Listing Before Validation *****

| Count | Type | Form | Description |
|-------|------|------|-------------------------------|
| ---- | ---- | ---- | ----- |
| 164 | 100 | 0 | Circular Arc |
| 8 | 102 | 0 | Composite Curve |
| 17 | 106 | 11 | Planar Piecewise Linear Curve |
| 21 | 106 | 12 | Piecewise Linear Curve |
| 24 | 106 | 20 | Centerline Through Points |
| 4 | 106 | 31 | Section Entity |
| 27 | 106 | 40 | Witness Line |
| 44 | 108 | 0 | Plane (Unbounded) |
| 669 | 110 | 0 | Line |
| 21 | 116 | 0 | Point |

| | | | |
|-----|-----|----|-----------------------------------|
| 41 | 124 | 0 | Transformation Matrix |
| 13 | 126 | 0 | Rational B-Spline Curve (General) |
| 12 | 202 | 0 | Angular Dimension |
| 1 | 206 | 0 | Diameter Dimension |
| 20 | 210 | 0 | General Label |
| 148 | 212 | 0 | General Note (Simple) |
| 5 | 212 | 2 | General Note (Font change) |
| 2 | 212 | 4 | General Note (Subscript) |
| 146 | 212 | 7 | General Note (Center justified) |
| 1 | 212 | 8 | General Note (Right justified) |
| 58 | 214 | 3 | Leader (Filled triangle) |
| 6 | 216 | 0 | Linear dim - undetermined form |
| 6 | 228 | 3 | General Symbol (Feature Ctrl Fr.) |
| 8 | 230 | 0 | Section Area (Standard Fill) |
| 3 | 304 | 2 | Line Font Definition (Pattern) |
| 57 | 312 | 0 | Text Display Template (Absolute) |
| 9 | 314 | 0 | Color Definition |
| 4 | 320 | 0 | Network Subfigure Definition |
| 5 | 402 | 1 | Group (Unordered, w/back ptrs) |
| 19 | 402 | 3 | Views Visible |
| 42 | 402 | 19 | Segmented Views Visible |
| 3 | 404 | 0 | Drawing (form 0) |
| 28 | 406 | 5 | Property (Line Widening) |
| 14 | 406 | 15 | Property (Name) |
| 3 | 406 | 16 | Property (Drawing Size) |
| 3 | 406 | 17 | Property (Drawing Units) |
| 11 | 410 | 0 | View |
| 6 | 420 | 0 | Network Subfigure Instance |

1673 - Number of entities in selection list

***** Key to Validation Level Descriptions *****

Severity 4 - Explicit Error
Severity 3 - Implicit Error
Severity 2 - Explicit Warning
Severity 1 - Implicit Warning

***** Entity Validation *****

===== Entities Which Were Corrected =====

===== Entities Which Were Not Corrected =====

*** Severity 4 (IEVM_BAD_DE_MATRIX_PTR) ***

This entity references a Transformation Matrix entity (124) in its DE section. The Transformation Matrix entity (whose DE number is %ld) being referenced does not conform to IGES. Refer to other validation messages based on the Transformation Matrix Entity's DE number to determine the exact cause of the problem.

| Type:Form | DE # |
|-----------|------------------------------|
| ----- | ---- |
| 100:0 | 205, 229, 231, 233, 235, ... |
| 210:0 | 1321, 1327 |
| 410:0 | 45, 59, 111, 123 |

This occurred on 136 entities

*** Severity 4 (IEVM_ZERO_LENGTH_ARC_100) ***

This Circular Arc Entity (Type 100) has an effective zero length within the stated tolerance. Start point: %.7e, %.7e. Terminate point: %.7e, %.7e.

| Type:Form | DE # |
|-----------|------------------------------|
| ----- | ---- |
| 100:0 | 205, 445, 451, 455, 459, ... |

This occurred on 65 entities

*** Severity 4 (IEVM_FIRST_NOT_COLINEAR_106) ***

The first 3 data points in this Witness Line Entity (106:40) are not directionally colinear within the stated tolerance. All vectors formed by consecutive points must be in the same direction.

| Type:Form | DE # |
|-----------|----------------------|
| ----- | ---- |
| 106:40 | 819, 821, 2213, 2215 |

This occurred on 4 entities

*** Severity 4 (IEVM_BAD_VECTOR_124) ***

This Transformation Matrix entity (124) has a a column that is not a unit vector within the stated tolerance.

| Type:Form | DE # |
|-----------|----------------------------|
| ----- | ---- |
| 124:0 | 35, 49, 203, 227, 249, ... |

This occurred on 35 entities

*** Severity 4 (IEVM_BAD_SUBENT_216) ***

This Linear Dimension entity (216) references an entity (DE %ld) that failed validation.

| Type:Form | DE # |
|-----------|----------------------|
| ----- | ---- |
| 216:0 | 823, 823, 2217, 2217 |

This occurred on 4 entities

*** Severity 4 (IEVM_BAD_VIEW_SUBENT_402_19) ***

This Associativity Instance Segmented Views Visible entity (402:19) references a View entity (Index 2, 8, etc. of Parameter Data) (DE %ld in block %ld) that failed validation.

| Type:Form | DE # |
|-----------|------------------------------|
| ----- | ---- |
| 402:19 | 545, 545, 545, 549, 549, ... |

This occurred on 144 entities

*** Severity 2 (IEVM_BAD_DE_VIEW_PTR) ***

This entity references a View entity (410) in its DE section. The View entity (whose DE number is %ld) being referenced does not conform to IGES. Refer to other validation messages based on the View Entity's DE number to determine the exact cause of the problem.

| Type:Form | DE # |
|-----------|--------------------------------|
| ----- | ---- |
| 100:0 | 593, 721, 831, 1175, 1203, ... |
| 110:0 | 547, 551, 555, 589, 685, ... |

This occurred on 42 entities

*** Severity 2 (IEVM_BAD_PLANAR_FLAG_126) ***

This Rational B-Spline Curve entity's (126) Planar/Nonplanar property flag (Index 3 of Parameter Data) incorrectly specifies the entity as nonplanar. The entity is planar within the specified tolerance.

| Type:Form | DE # |
|-----------|-----------------------------------|
| ----- | ---- |
| 126:0 | 1337, 1339, 1391, 1393, 1751, ... |

This occurred on 7 entities

*** Severity 2 (IEVM_BAD_NONPLANAR_FLAG_126) ***

This Rational B-Spline Curve entity's (126) Planar/Nonplanar property flag (Index 3 of Parameter Data) incorrectly specifies the entity as planar. The entity is nonplanar within the specified tolerance.

| Type:Form | DE # |
|-----------|-----------------------------------|
| ----- | ---- |
| 126:0 | 2653, 2655, 2657, 2663, 2665, ... |

This occurred on 6 entities

*** Severity 2 (IEVM_BAD_VIEW_SUBENT_402_3) ***

This Associativity Instance Views Visible entity (402:3) has a View Entity pointer (Index 3 through 2+N1 of Parameter Data) that references an entity (DE %ld) that failed validation.

| Type:Form | DE # |
|-----------|------------------------------|
| ----- | ---- |
| 402:3 | 183, 183, 183, 447, 447, ... |

This occurred on 62 entities

*** Severity 1 (IEVM_BAD_ENT_PTR_404) ***

This Drawing entity (404) has an Annotation Entity pointer that references DE %ld%s. This pointer must reference a an Annotation Entity as defined in the DDF.

| | |
|-----------|-----------------------------------|
| Type:Form | DE # |
| ----- | ---- |
| 404:0 | 2499, 2499, 2499, 2499, 2499, ... |

This occurred on 57 entities

*** Severity 1 (IEVM_BAD_SUBENT_404) ***

This Drawing entity (404) references an entity (DE %ld) that failed validation.

| | |
|-----------|-----------------------------------|
| Type:Form | DE # |
| ----- | ---- |
| 404:0 | 2499, 2499, 2499, 2499, 2499, ... |

This occurred on 9 entities

Entity Validation Summary:

| Type | Form | Entity Count | Number Valid | Number of Corrected | | Number of Uncorrected | |
|----------------|------|--------------|--------------|---------------------|--------|-----------------------|--------|
| | | | | Warnings | Errors | Warnings | Errors |
| Global Section | | 1 | 1 | 0 | 0 | 0 | 0 |
| 100 | 0 | 164 | 28 | 0 | 0 | 13 | 195 |
| 102 | 0 | 8 | 8 | 0 | 0 | 0 | 0 |
| 106 | 11 | 17 | 17 | 0 | 0 | 0 | 0 |
| 106 | 12 | 21 | 21 | 0 | 0 | 0 | 0 |
| 106 | 20 | 24 | 24 | 0 | 0 | 0 | 0 |
| 106 | 31 | 4 | 4 | 0 | 0 | 0 | 0 |
| 106 | 40 | 27 | 23 | 0 | 0 | 0 | 4 |
| 108 | 0 | 44 | 44 | 0 | 0 | 0 | 0 |
| 110 | 0 | 669 | 640 | 0 | 0 | 29 | 0 |
| 116 | 0 | 21 | 21 | 0 | 0 | 0 | 0 |
| 124 | 0 | 41 | 6 | 0 | 0 | 0 | 35 |
| 126 | 0 | 13 | 0 | 0 | 0 | 13 | 0 |
| 202 | 0 | 12 | 12 | 0 | 0 | 0 | 0 |
| 206 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 210 | 0 | 20 | 18 | 0 | 0 | 0 | 2 |
| 212 | 0 | 148 | 148 | 0 | 0 | 0 | 0 |
| 212 | 2 | 5 | 5 | 0 | 0 | 0 | 0 |
| 212 | 4 | 2 | 2 | 0 | 0 | 0 | 0 |
| 212 | 7 | 146 | 146 | 0 | 0 | 0 | 0 |
| 212 | 8 | 1 | 1 | 0 | 0 | 0 | 0 |
| 214 | 3 | 58 | 58 | 0 | 0 | 0 | 0 |
| 216 | 0 | 6 | 4 | 0 | 0 | 0 | 4 |
| 228 | 3 | 6 | 6 | 0 | 0 | 0 | 0 |

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| | | | | | | | |
|---------|------|------|----|---|-----|-----|-----|
| 230 | 0 | 8 | 8 | 0 | 0 | 0 | 0 |
| 304 | 2 | 3 | 3 | 0 | 0 | 0 | 0 |
| 312 | 0 | 57 | 57 | 0 | 0 | 0 | 0 |
| 314 | 0 | 9 | 9 | 0 | 0 | 0 | 0 |
| 320 | 0 | 4 | 4 | 0 | 0 | 0 | 0 |
| 402 | 1 | 5 | 5 | 0 | 0 | 0 | 0 |
| 402 | 3 | 19 | 0 | 0 | 0 | 62 | 0 |
| 402 | 19 | 42 | 0 | 0 | 0 | 0 | 144 |
| 404 | 0 | 3 | 0 | 0 | 0 | 66 | 0 |
| 406 | 5 | 28 | 28 | 0 | 0 | 0 | 0 |
| 406 | 15 | 14 | 14 | 0 | 0 | 0 | 0 |
| 406 | 16 | 3 | 3 | 0 | 0 | 0 | 0 |
| 406 | 17 | 3 | 3 | 0 | 0 | 0 | 0 |
| 410 | 0 | 11 | 7 | 0 | 0 | 0 | 4 |
| 420 | 0 | 6 | 6 | 0 | 0 | 0 | 0 |
| <hr/> | | | | | | | |
| Totals: | 1674 | 1385 | 0 | 0 | 183 | 388 | |

9.1.4 Error Log - Preview

ERROR REPORT FOR FILE /novell/94055/vla.igs

>> File record length is 81 (1 record terminator used)

Terminate section report :

| File Section | #lines |
|-----------------|--------|
| START | 1 |
| GLOBAL | 4 |
| DIRECTORY ENTRY | 3346 |
| PARAMETER DATA | 3734 |
| TERMINATE | 1 |
| TOTAL | 7086 |

(Expect 81 X 7086 = 573966 bytes)

----- preliminary format scan complete -----

>> WARNING: Cannot use maximum power of 10 requested.
: Requested maximum power of 308 using 307.
: Field 11 line 2 of GLOBAL section. (Max. Exp. for Double)
n,34HCADDS-IGES REVISION 7.0 (1-Apr-93),32,38,6,308,14,18He.3322.620.620G 2
^^^

>> ERROR: Unsupported ASSOCIATIVITY INST entity form 19. (entity DELETED)
: Entity #273, DE entry #545.

>> WARNING: Premature end of record.
: Reading entity #273, DE entry #545 type ASSOCIATIVITY INST.
: Field 28, line 559 of PARAMETER DATA section.
1.0,0,,,123,1.0,0,,,137,1.0,0,,,149,1.0,0,,,163,1.0,0,,,; 545P 559

>> WARNING: Error in pointer to DE Section (replaced with 0).
: Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.
: Field 3, line 610 of PARAMETER DATA section.
402,12,31,6.2831854820251,0,,,45,6.2831854820251,0,,,59, 591P 610
^^^^^^^^^^^^^^^^

>> WARNING: Error in pointer to DE Section (replaced with 0).
: Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.
: Field 9, line 610 of PARAMETER DATA section.
402,12,31,6.2831854820251,0,,,45,6.2831854820251,0,,,59, 591P 610
^^^^^^^^^^^^^^^^

```
-----
>> WARNING: Error in pointer to DE Section (replaced with 0).
      : Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.
      : Field 0, line 611 of PARAMETER DATA section.
6.2831854820251,0,,,,,71,6.2831854820251,0,,,,,99,1.217981338501,      591P  611
      ^^^^^
```

```
-----
>> WARNING: Error in pointer to DE Section (replaced with 0).
      : Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.
      : Field 6, line 611 of PARAMETER DATA section.
6.2831854820251,0,,,,,71,6.2831854820251,0,,,,,99,1.217981338501,      591P  611
      ^^^^^^^^^^^^^^^^^
```

```
-----
>> WARNING: Error in pointer to DE Section (replaced with 0).
      : Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.
      : Field 11, line 612 of PARAMETER DATA section.
0,,,,,99,5.0494122505188,1,,,,,99,6.2831854820251,0,,,,,111,      591P  612
      ^^^^^^^^^^^^^^^^^
```

```
-----
>> WARNING: Error in pointer to DE Section (replaced with 0).
      : Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.
      : Field 0, line 613 of PARAMETER DATA section.
6.2831854820251,0,,,,,123,6.2831854820251,0,,,,,137,      591P  613
      ^^^^^^^^^^^^^^^^^
```

```
-----
>> WARNING: Error in pointer to DE Section (replaced with 0).
      : Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.
      : Field 6, line 613 of PARAMETER DATA section.
6.2831854820251,0,,,,,123,6.2831854820251,0,,,,,137,      591P  613
      ^^^^^^^^^^^^^^^^^
```

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

```
-----
>> WARNING: Error in pointer to DE Section (replaced with 0). : Reading
      entity #1019, DE entry #2037 type ASSOCIATIVITY INST. : Field 0, line
      2395 of PARAMETER DATA section.
6.2831854820251,0,,,,,163,6.2831854820251,0,,,;      2037P
2395 ^^^^^^^^^^^^^^^^^
```

```
-----
>> WARNING: Error in pointer to DE Section (replaced with 0). : Reading
      entity #1211, DE entry #2421 type ASSOCIATIVITY INST. : Field 3, line
      2880 of PARAMETER DATA section.
      402,10,31,6.2831854820251,0,,,,,45,4.8046808242798,1,,,,,45,
      2421P  2880 ^^^^^^^^^^^^^^^^^
-----
```

>> WARNING: Error in pointer to DE Section (replaced with 0). : Reading entity #1211, DE entry #2421 type ASSOCIATIVITY INST. : Field 9, line 2880 of PARAMETER DATA section.

402,10,31,6.2831854820251,0,,,,45,4.8046808
242798,1,,,,45, 2421P 2880
^^^^^^^^^^^^^^^^^^

>> WARNING: 42 dangling entities inactivated in consistency check :

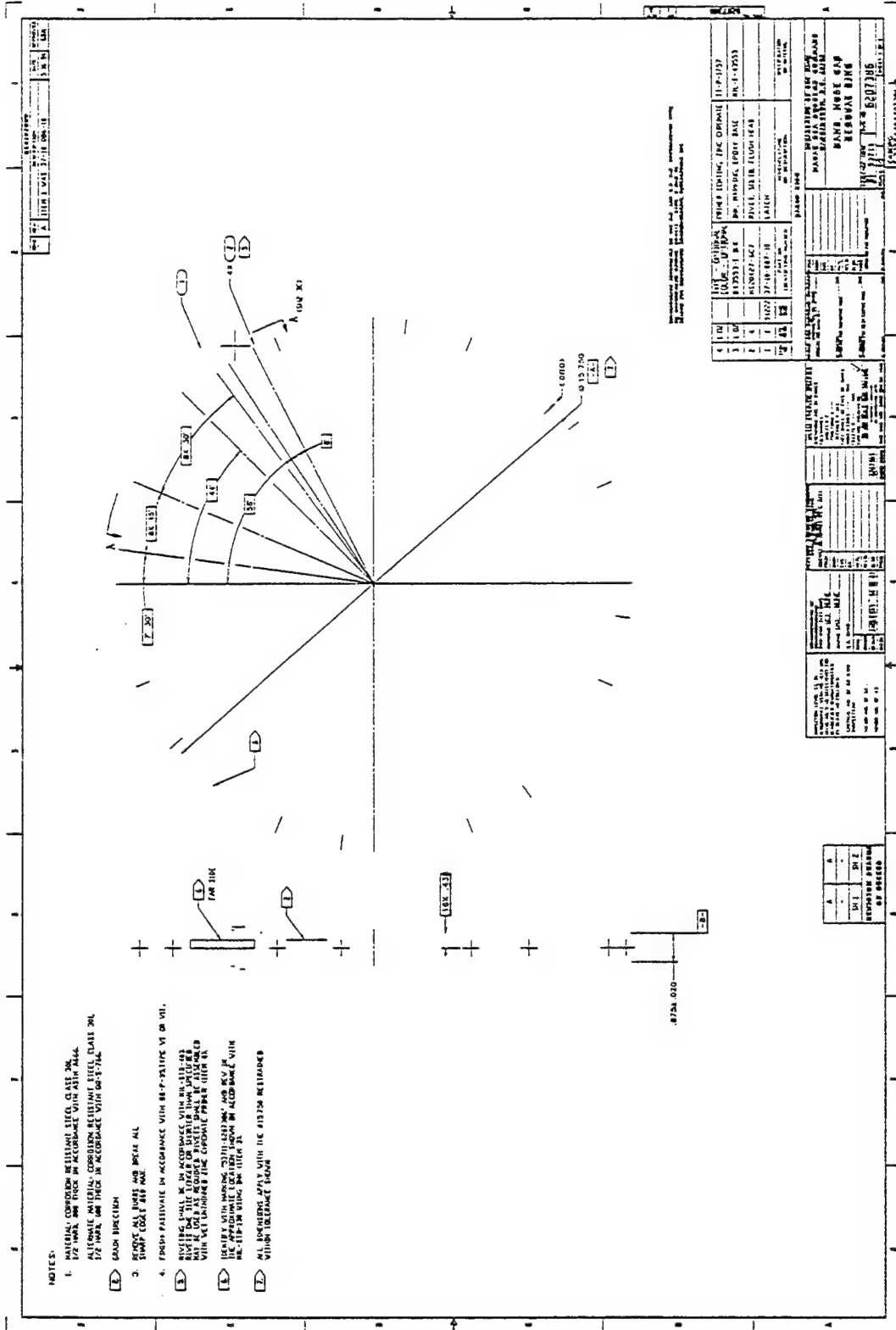
Entity # 274, type LINE.
Entity # 276, type LINE.
Entity # 278, type LINE.
Entity # 295, type LINE.
Entity # 297, type CIRCULAR ARC.
Entity # 343, type LINE.
Entity # 345, type LINE.
Entity # 347, type LINE.
Entity # 349, type LINE.
Entity # 351, type LINE.
Entity # 354, type LINE.
Entity # 361, type CIRCULAR ARC.
Entity # 368, type LINE.
Entity # 416, type CIRCULAR ARC.
Entity # 588, type CIRCULAR ARC.
Entity # 602, type CIRCULAR ARC.
Entity # 622, type CIRCULAR ARC.
Entity # 642, type LINE.
Entity # 644, type LINE.
Entity # 648, type CIRCULAR ARC.
Entity # 709, type CIRCULAR ARC.
Entity # 712, type LINE.
Entity # 719, type LINE.
Entity # 795, type LINE.
Entity # 815, type LINE.
Entity # 828, type LINE.
Entity # 837, type CIRCULAR ARC.
Entity # 839, type LINE.
Entity # 843, type LINE.
Entity # 880, type LINE.
Entity # 885, type LINE.
Entity # 890, type LINE.
Entity # 892, type LINE.
Entity # 901, type LINE.
Entity # 1006, type LINE.
Entity # 1008, type LINE.
Entity # 1011, type CIRCULAR ARC.
Entity # 1013, type LINE.

Entity # 1015, type LINE.
Entity # 1020, type CIRCULAR ARC.
Entity # 1210, type CIRCULAR ARC.
Entity # 1212, type CIRCULAR ARC.

42 entities were deleted due to read errors

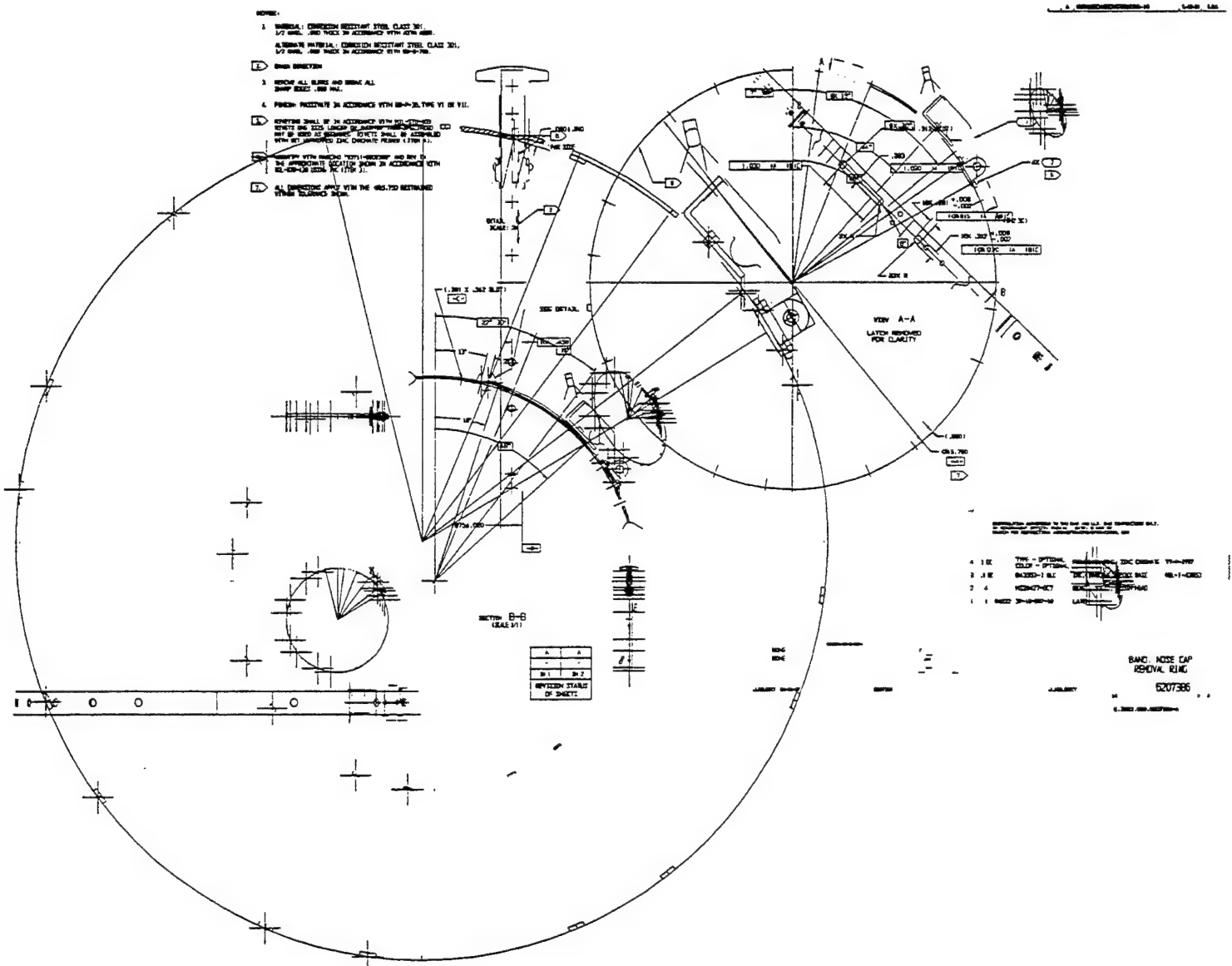
Found 87 errors and 44 warnings

9.1.5 Output AutoCAD R12 - Drawing 1

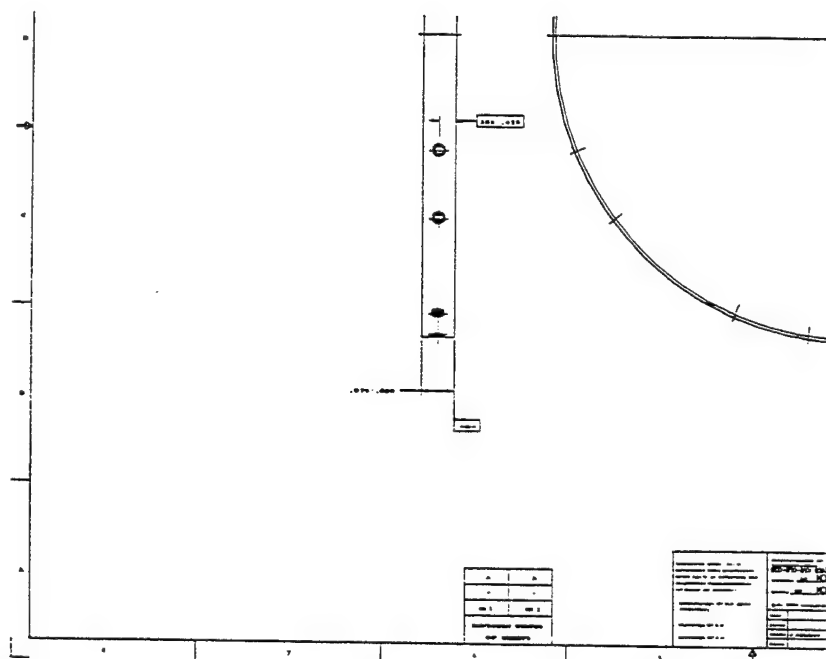


[illegible]

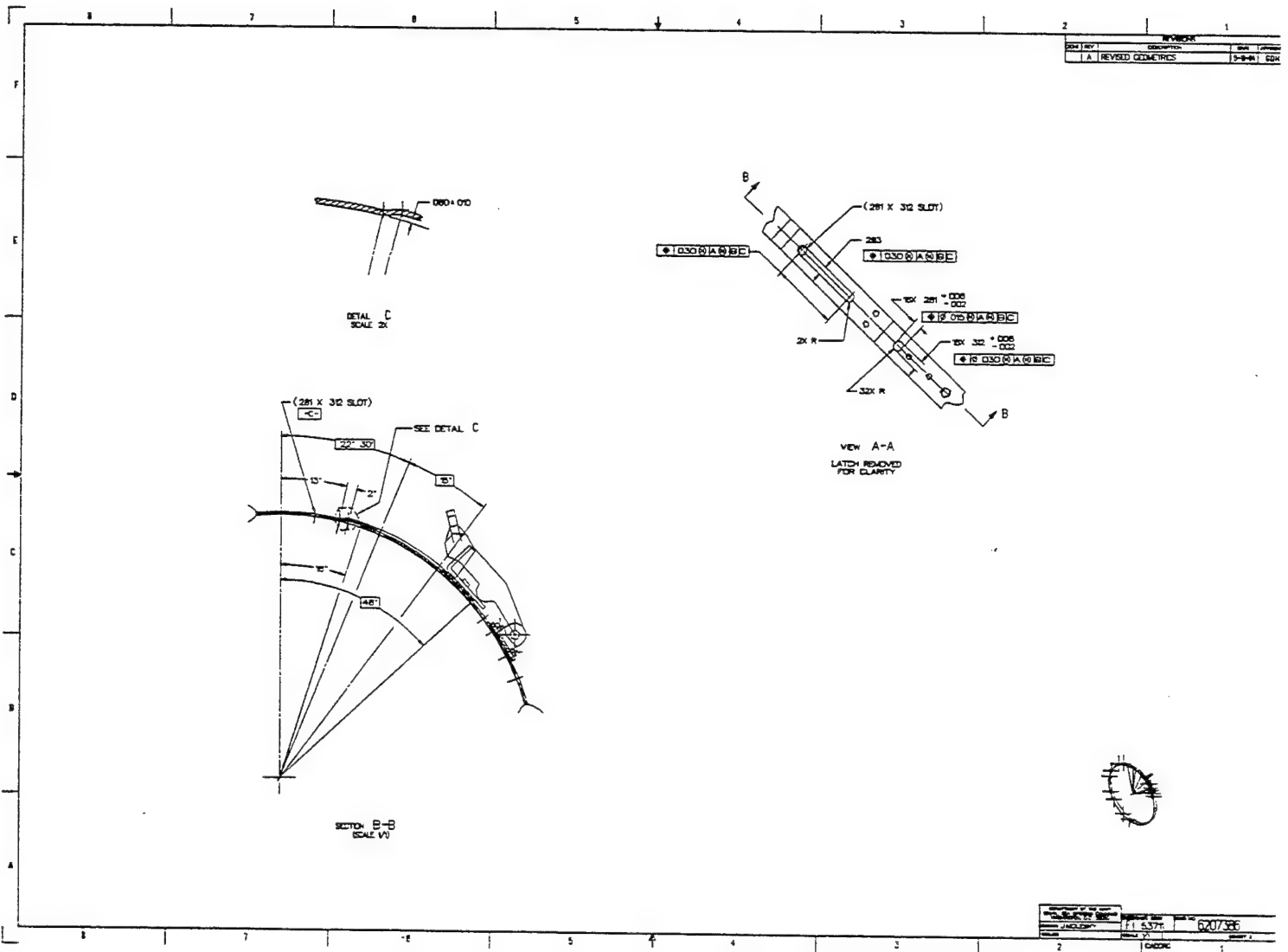
9.1.7 Output Cadkey v6.00



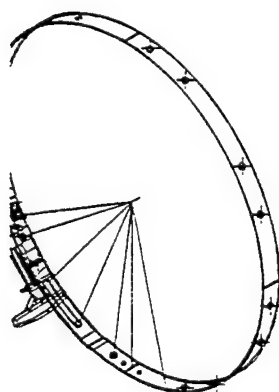
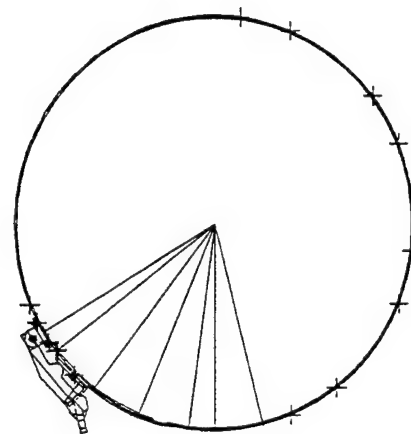
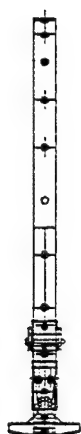
9.1.8 Output CADLeaf



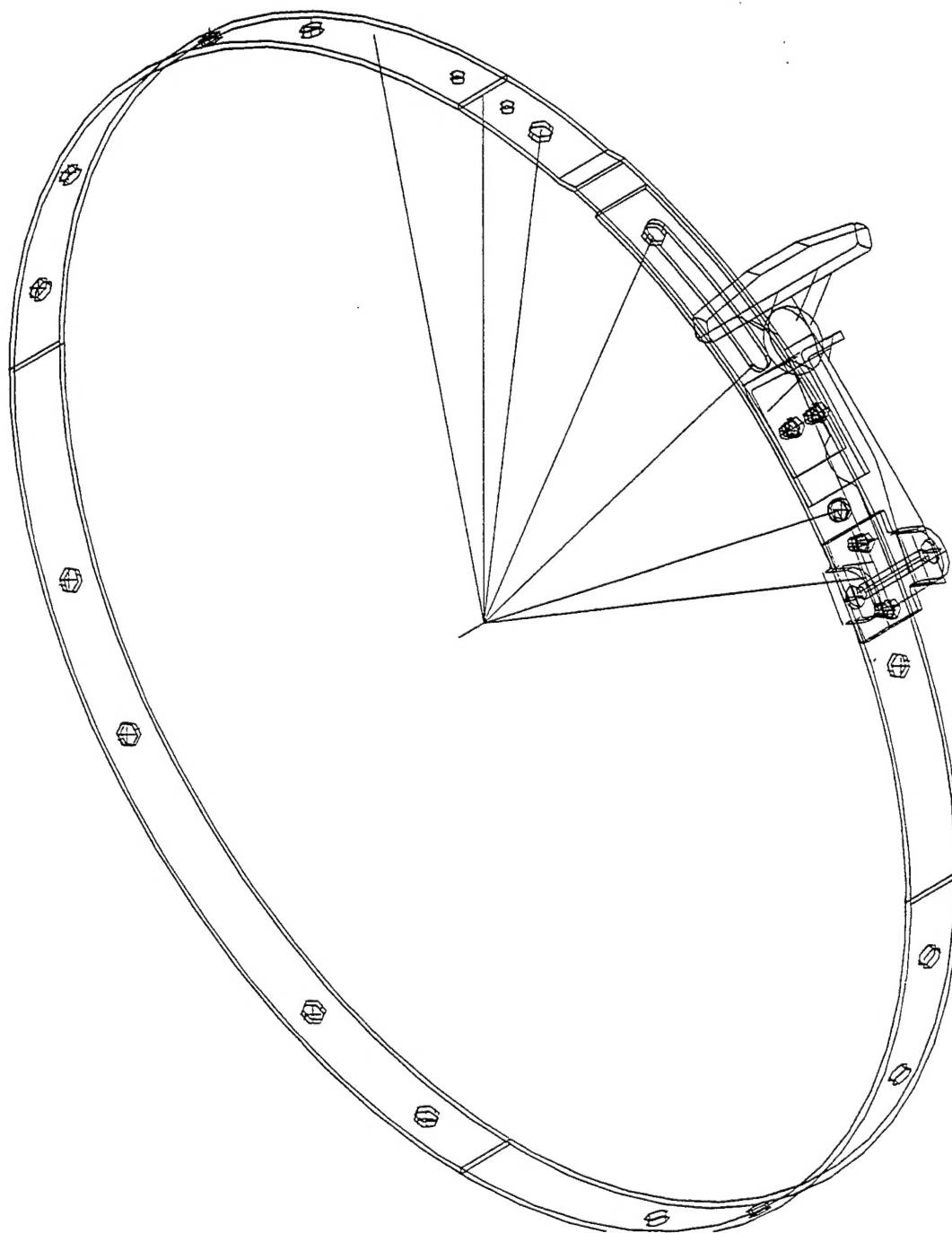
9.1.10 Output IGESView - Drawing 2



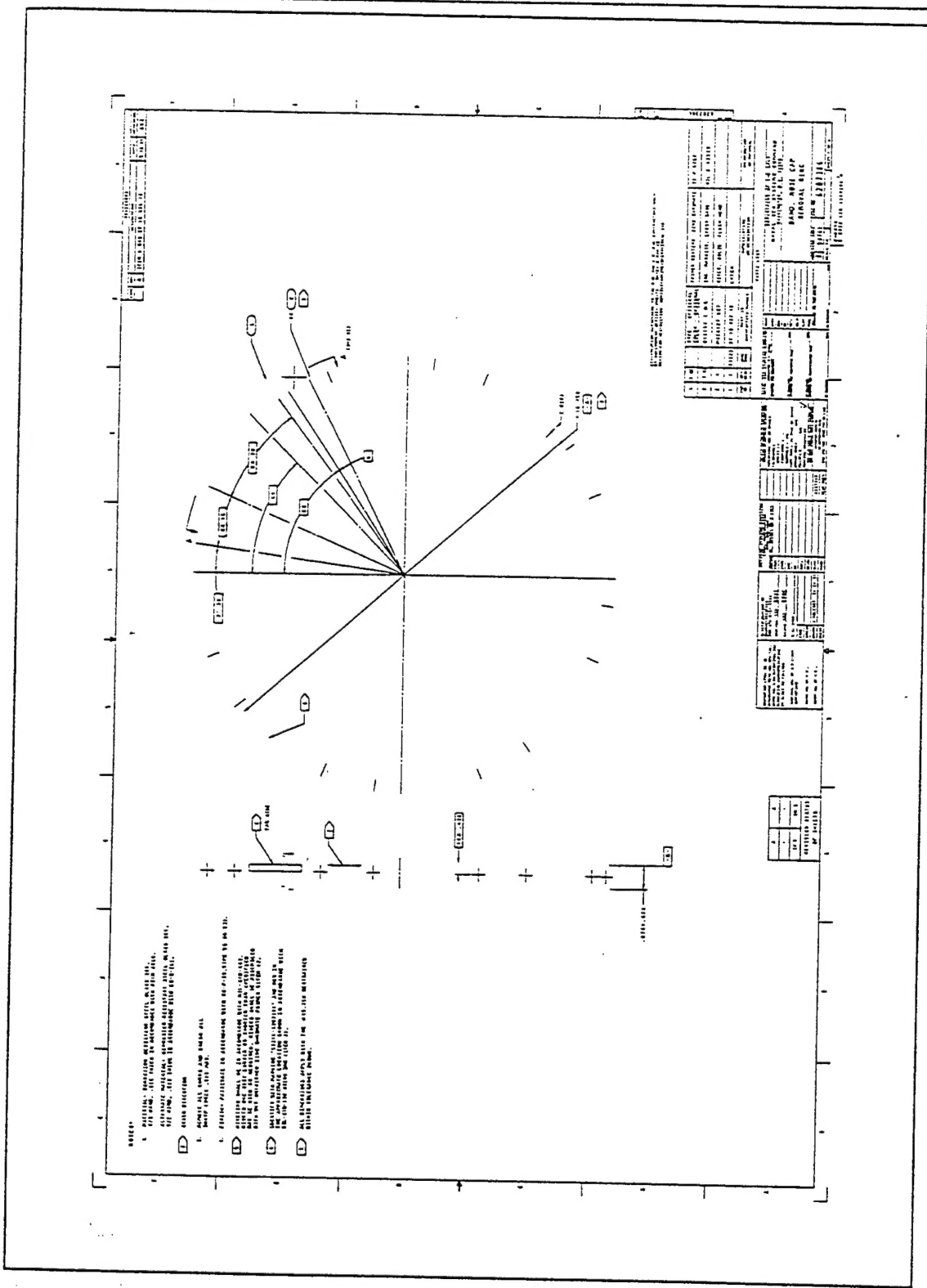
9.1.11 Output IGESView - Layout



9.1.12 Output IGESView - ISO



9.1.13 Output IGESWorks



9.1.14 Output IslandDraw

